

ABSTRACT

A method for making an optical composite composed of glass and plastic is disclosed. The method can be used to create a photochromic lens of high optical and refractive quality that is both scratch resistant and of high impact resistance. The method can also be used to create a strong sheath and/or cladding for an optic fiber. The method can also be used to create a scratch resistant coating for polycarbonate material, such as bulletproof glass. Vacuum pressure and optical contacting are used to hold the glass and plastic portions together. A flexible, peripheral seal, whose kinetic reaction strength has been enhanced with microwave radiation, is used to maintain the vacuum adhesion of the glass and the plastic. This structural seal is located in a peripheral, non-optical portion of the optical composite to minimize any interference the seal may have with the optical function of the composite.